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REMARKS

JUL 25 2006

Claims 1-4, 8-13 and 20 are pending in the application. Claims 1, 8, and 20 are currently amended. Claims 14-19 and 21-34 have been previously withdrawn without prejudice. Claims 5-7 have been previously cancelled.

Claim Rejections – 35 U.S.C. §112 First Paragraph

Claim 1 stands rejected under 35 U.S.C. §112 First Paragraph for lack of enablement. Claim 1 has been amended for clarity. For instance, the word "combination" is deleted to avoid the impression that the NIR spectra are obtained from a mixture of plant samples with different SCN resistance genotypes. The addition of "known genotypes with varying levels of resistance to soybean cyst nematode" draws support from the specification as originally filed, for example, from lines 1-2 of Paragraph 51 ("Nine cultivars were selected for this experiment. These cultivars represented a wide range of genetic diversity for SCN resistance."). The Examiner has stated that the instant application is enabling in obtaining separate spectral data and applying discriminant analysis to these separate data. Claim 1, as amended, recites these enabled steps. Withdrawal of the non-enablement rejection is respectfully requested.

Claim Rejections – 35 U.S.C. §112 Second Paragraph

Claims 1, 4, 8, 9 and 20 stand rejected under 35 U.S.C. §112 Second Paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected because the use of the phrase "based upon" makes it unclear whether the discriminant analysis is based upon a predictive model or based upon regression analysis. Applicant has amended step (b) of Claim 1 for clarification purpose.

Claim 4 is rejected for being unclear. Applicant respectfully disagrees with Examiner because the plain language of Claim 4, along with the teaching in the specification (See Paragraphs 61-53), indicates that it is the assay spectra and the predictive model that are being compared to yield the comparison results. Withdrawal of the rejection is respectfully requested.

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Claims 8 and 20 are both rejected for indefiniteness. Both Claims 8 and 20 have been amended for purpose of clarification. Withdrawal of the rejection is respectfully requested.

Claim Rejections – 35 U.S.C. §103

Claims 1-4, 10-13, and 20 stand rejected under 35 U.S.C. §103(a) as being obvious over Qui et al. (Biotechnology and Bioengineering, Vol 44, No. 1, 1994) (*sic*), in view of Malins et al. (U.S. Patent No. 6,214,550). Applicant can not locate the reference by Qui et al. either in the files of this case or in the literature database. Because the Examiner has also stated that Qui et al had been discussed in previous Office Action, Applicant suspects that Examiner had intended to cite Qiu et al. (Theor. Appl. Genet (1999) 98: 356-64). Accordingly, Applicant is responding based upon the assumption that Claims 1-4, 10-13, and 20 stand rejected under 35 U.S.C. §103(a) as being obvious over Qiu et al., Theor. Appl. Genet (1999) 98: 356-64, in view of Malins et al. (U.S. Patent No. 6,214,550). Applicant respectfully requests clarification from the Examiner if such an assumption is mistaken.

Applicant respectfully disagrees with the Examiner's position that Claims 1-4, 10-13, and 20 are rendered obvious by Qiu et al. and Malins et al. This is because the combination of references fails to teach or suggest each limitation of the present claims. "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA, 1974). Qiu et al. disclose using NIR methods to measure seed composition in soybean. Qiu et al. also attempt to find RFLP markers associated with both SCN resistance and seed composition, but fail to identify such common markers definitively. More importantly, no correlation between the NIR spectra and SCN susceptibility is discussed in Qiu et al.

What is claimed pertains to establishing the relationship between the spectra and SCN susceptibility within specific wavelength ranges. See e.g., lines 1-2, Paragraph 63 of the instant application, "Spectral data was analyzed visually to determine if differences between SCN resistant and susceptible lines could be detected by NIRs." Also see lines

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6-7 of Paragraph 63 of the instant application, "The black line shows a fairly strong positive correlation between F1 and NIR absorption in this region of the spectrum."). Independent Claims 1 and 12 both recite the limitation of the NIR spectra being compared with a predictive model for SCN resistance. This feature of what is claimed is missing in Qiu et al. Indeed, it is virtually impossible for Qiu et al. to describe or suggest this limitation without first showing a correlation between the NIR or other spectra and SCN susceptibility.

With all due respect, Qiu et al. does not show spectral correclation to confirm nematode resistance as claimed. With respect to Malins et al., nothing is mentioned in that reference that is relevant to the comparison of the spectra with a predictive model for SCN resistance.

Even if we assume, arguendo, that every limitation of the rejected claims is present in the cited art, there is no teaching or suggestion in Qiu et al. or Malins et al. that would motivate one to combine or modify the separate teachings in these two references to arrive at the invention as presently claimed. Therefore, taken as a whole, Claims 1-4, 10-13, and 20 are not rendered obvious by Qiu et al. in view of Malins et al.

Claims 1-4, 8-13, and 20 stand rejected under 35 U.S.C. §103(a) as being obvious over Qui et al. (Biotechnology and Bioengineering, Vol 44, No. 1, 1994), in view of Borggaard et al. (Anal. Chem. 1992, 64:545-51). Applicant disagrees with Examiner for reasons similar to the ones present in the previous section. Because the limitation of NIR spectra being compared with a predictive model for SCN resistance is missing in Qiu et al., and nothing is mentioned in Borggaard et al. with respect to comparing NIR spectra with a predictive model for SCN resistance, not every limitation of the rejected claims is described or suggested in the cited references. The Examiner has not established a *prima facie* case of obviousness and withdrawal of the rejections is respectfully requested.

For the reasons stated above, Applicant's attorney respectfully solicits a Notice of Allowance. Applicant is submitting this response with a petition for extension of time along with appropriate fees. However, if any additional fees are deemed necessary in

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connection with this filing, the Commissioner is hereby authorized to charge deposit account No. 12-0600.

Respectfully submitted



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